

Boralex Fort Fairfield, Inc.)	Department
Aroostook County)	Findings of Fact and Order
Fort Fairfield, Maine)	Part 70 Air Emission License
A-181-70-D-A)	Amendment #2

After review of the Part 70 Administrative Revision application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to Chapters 115 and 140 and to 38 M.R.S.A, Section 344 and Section 590, the Department finds the following facts:

I. Registration

A. Introduction

FACILITY	Boralex Fort Fairfield, Inc. (BFF)
LICENSE NUMBER	A-181-70-A-I
LICENSE TYPE	Initial Part 70 License
NAICS CODES	4911-Electrical Generation
NATURE OF BUSINESS	Electric Generating Station
FACILITY LOCATION	P.O. Box 430 Cheney Grove Rd., Fort Fairfield
INITIAL LICENSE ISSUANCE DATE	July 19, 2002
MINOR MODIFICATION ISSUANCE DATE	October 20, 2005
LICENSE EXPIRATION DATE	July 19, 2007

B. Nature of Minor Modification Request

Boralex is seeking to amend Boralex Fort Fairfield, Inc. (BFF) Part 70 air emission license to include the installation and operation of an ECOTUBE system, which, in brief, is a technology that has the capability of reducing emissions of NO_x, as well as particulate, CO and VOC.

C. Application Classification

BFF performed a Best Available Control Technology (BACT) analysis and has requested a Minor Modification to install the ECOTUBE system. The installation of the ECOTUBE System does not violate any applicable requirements or state requirements and does not reduce monitoring, reporting, testing or record keeping requirements. As such, this modification is being classified as a Minor Modification of a Part 70 Source under MEDEP Chapter 140 and has been processed as such.

D. Justification for Revision Request

Boralex is seeking to certify BFF as a renewable energy generator by the State of Massachusetts through the Division of Energy Resources and possibly through the State of Connecticut through the Department of Public Utilities Commission (DPUC). Massachusetts has a Renewable Portfolio Standard (RPS) that by the regulation details the criteria that must be met in order to obtain certification. Once certified, Boralex will be allowed the opportunity to compete for the sale of renewable energy credits (RECs) directly to those generators or their energy marketing representatives which must have these credits to meet their RPS requirements. In order to meet the criteria of the Massachusetts RPS program and acquire certification, Boralex must install new low emission advanced biomass power conversion technology. To satisfy this requirement, Boralex proposes to install and operate an ECOTUBE system.

The ECOTUBE system consists of two liquid cooled, automatically retractable opposing tubes (ECOTUBES) installed in a specific location in the upper furnace area of the boiler. By using two opposing tubes, it is possible to cover almost all the horizontal cross-section in the boiler. Ambient air is introduced into the boiler through the ECOTUBES at high pressure and speed through strategically located nozzles, resulting in an increase in combustion efficiency and a reduction in overall criteria pollutant emissions, as well as an increase in thermal efficiency and a reduction in fuel consumption.

Boralex plans to operate the ECOTUBE system at all times to meet the facility's NO_x emission limit of 0.3 lbs/MMBtu as established in Part 70 Air Emission License A-181-70-A-I. Boralex may also inject urea through the ECOTUBE as an SNCR control option. Boralex plans to operate the ECOTUBE with urea reagent only during periods when selling RECs into the Massachusetts or Connecticut market and it is necessary to meet Connecticut's emissions criteria for NO_x of 0.075 lb/MMBtu for Class I certification. In order to minimize urea consumption and minimize ammonia slip (NH₃-slip), Boralex plans to operate the ECOTUBE system without urea reagent injection at all other times.

Boralex Shall be limited to an ammonia slip (NH₃ slip) emission limit of no greater than 40.0 ppm_{dv} on a dry basis on a one-hour average (corrected to 12% CO₂). Compliance with this limit shall be demonstrated by annual stack testing, which shall be carried out under normal operating conditions with urea injection.

Upon review of the renewal of the Boralex Fort Fairfield Part 70 Air Emission License (A-181-70-A-I), the NH₃ slip emissions restrictions will again be reviewed and a determination of emissions restrictions changes and/or testing schedule changes will also be done.

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Boralex shall establish a system of maintenance, inspection and repair for the ECOTUBE system at BFF, which shall allow for periodic inspection of the system to ensure the system's proper function and operation. Boralex shall document compliance by means of a maintenance, inspection and repair log, in which Boralex shall record all routine maintenance as well as all inspection dates and findings and subsequent actions. Boralex shall include in the log, a record of urea injection operations, which shall include dates urea injection is utilized and amounts of urea reagent utilized.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that emissions from this source:

- will receive Best Practical Treatment;
- will not violate applicable emissions standards
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources

The Department hereby grants Part 70 minor modification A-181-70-D-A, subject to the conditions found in Part 70 Air Emission License A-181-70-A-I, Part 70 Air Emission License Amendment A-181-70-B-A and the following conditions:

The following shall be in addition to Condition (22) in Air Emissions License A-181-70-A-I:

(25) M. Boralex may install and operate an ECOTUBE system.

N. Boralex shall be limited to an ammonia slip (NH₃ slip) emission limit of no greater than 40 ppm_{dv} on a dry basis on a one-hour average (corrected to 12% CO₂). Compliance with this limit shall be demonstrated by annual stack testing, which shall be carried out under normal operating conditions with urea injection. The first stack test shall take place within six months of the initial operation of the ECOTUBE system in which urea injection is utilized for NO_x control and subsequent tests shall take place annually thereafter. (Initial use of urea injection for NO_x control does not include those periods of time that initial tuning of the use of urea with the ECOTUBE is undertaken.) [MEDEP Chapter 140, BACT] *Enforceable by State-only*

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Enforceable by State-only

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
 DAWN R. GALLAGHER, COMMISSIONER

This license shall expire concurrently with license A-181-70-A-I.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: **June 16, 2005**

Date of application acceptance: **June 23, 2005**

Date filed with the Board of Environmental Protection _____

This Order prepared by Peter G. Carleton, Bureau of Air Quality.